

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing Of Claims:

1.-10. (Canceled)

11. (New) A circuit configuration for operating a gas sensor, comprising:

a structure including a reference gas space;

a reference electrode situated in the reference gas space;

a current source for supplying a reference pump current to the reference electrode; and

a diagnostic system including a timer, wherein:

the diagnostic system delivers a current selection signal to the current source for setting the reference pump current during a diagnostic operation of the gas sensor,

the diagnostic system delivers a switch signal to the timer for starting the timer, and

the diagnostic system evaluates a sensor signal of the gas sensor during diagnostic operation based on time.

12. (New) The circuit configuration as recited in Claim 11, wherein the diagnostic system evaluates a rate of change of the sensor signal.

13. (New) The circuit configuration as recited in Claim 11, wherein the diagnostic system includes a comparator that compares the sensor signal with a threshold value to produce a comparison result and supplies a diagnostic signal as a function of the comparison result.

14. (New) The circuit configuration as recited in Claim 13, wherein the diagnostic signal stops the timer.

15. (New) The circuit configuration as recited in Claim 14, wherein:

the timer supplies an end signal that represents a time elapsed, and

the current selection signal is set as a function of the end signal for operating the gas sensor outside of the diagnostic operation.

16. (New) The circuit configuration as recited in Claim 15, wherein a time determinable by the timer is set at a maximum time.

17. (New) The circuit configuration as recited in Claim 15, wherein the current selection signal one of shuts down and triggers the current source to supply a negative reference pump current.

18. (New) The circuit configuration as recited in Claim 11, further comprising:
a resistor, wherein:

the reference electrode is permanently connected to a predefined potential across the resistor, and

a discharge current flowing across the resistor pumps out a reference gas.

19. (New) The circuit configuration as recited in Claim 11, wherein the gas sensor is a lambda sensor and the reference gas space contains oxygen as a reference gas.

20 (New) The circuit configuration as recited in Claim 9,
wherein the lambda sensor is situated in an exhaust gas system of an internal combustion engine and an enable signal (48) triggers the diagnosis after shutdown of the internal combustion engine.